

**PHASE-LOCKED LOOP LOCK DETECTOR CIRCUIT
AND METHOD OF LOCK DETECTION**

Abstract of the Disclosure

5 There is provided a phase-locked loop lock detector
circuit for detecting a lock or unlock state of a PLL
circuit. A synchronization circuit synchronizes a lock
window signal with a reference frequency signal. A rising
edge detection circuit and a falling edge detection circuit
10 output a state of an error signal at a rising edge of an
output signal of the synchronization circuit and at a rising
edge of an inverted lock window signal, respectively. A
logic circuit performs an AND operation on outputs of the
detection circuits, and outputs a signal indicating the lock
15 or unlock state.